

I Claim:

1. An exhaust muffler for a motor in a hand held, portable implement, comprising:

a muffler housing that encloses at least one damping chamber and has an inlet for exhaust gases from the motor and an outlet, wherein a resonator chamber is provided in said housing and is closed off so as to be substantially fluid-tight relative to said at least one damping chamber, wherein a resonance pipe that conveys exhaust gases is guided through said resonator chamber, and wherein an acoustic link is provided between said resonance pipe and said resonator chamber.

2. An exhaust muffler according to claim 1, wherein in a direction of flow of exhaust gas, said resonance pipe is disposed between said at least one damping chamber and said outlet.

3. An exhaust muffler according to claim 1, wherein said resonance pipe is provided with orifices to form said acoustic link to said resonator chamber.

4. An exhaust muffler according to claim 3, wherein a total surface area of said orifices of said resonance pipe ranges from 200 to 500 mm², especially 350 to 400 mm².

5. An exhaust muffler according to claim 3, wherein said orifices of said resonance pipe are circular and have a diameter ranging from 1 to 4 mm,

especially approximately 2 mm.

6. An exhaust muffler according to claim 3, wherein said resonance pipe is provided with 100 to 150, especially approximately 120, of said orifices.

7. An exhaust muffler according to claim 3, wherein said resonance pipe extends in a curved manner in said resonator chamber.

8. An exhaust muffler according to claim 3, wherein an end of said resonance pipe that is remote from at least one damping chamber forms said outlet.

9. An exhaust muffler according to claim 3, wherein said inlet and said outlet are disposed approximately across from one another.

10. An exhaust muffler according to claim 3, wherein said muffler housing comprises two half shells, namely a bottom shell that includes said inlet, and a top shell.

11. An exhaust muffler according to claim 10, wherein said resonator chamber is formed by a resonator chamber shell that is connected in a fluid-type manner with one of said half shells of said housing.

12. An exhaust muffler according to claim 11, wherein said resonator chamber shell is connected with said top shell.

13. An exhaust muffler according to claim 11, wherein said resonator chamber shell is connected with said half shell by brazing.

14. An exhaust muffler according to claim 9, wherein an end 18 of said resonance pipe that faces at least one damping chamber has a spacing relative to said resonator chamber.

15. An exhaust muffler according to claim 14, wherein said spacing is at least 30% of a height of said muffler housing, and wherein said height is the greater extension of said housing in a joining plane of said two half shells.

16. An exhaust muffler according to claim 14, wherein a portion of said resonance pipe that projects out of said resonator chamber into said at least one damping chamber extends approximately parallel to a joining plane of said two half shells, and wherein a longitudinal central axis of said resonance pipe extends approximately in a direction of a height of said exhaust muffler.

17. An exhaust muffler according to claim 3, wherein said resonator chamber is disposed within said muffler housing.

18. An exhaust muffler according to claim 3, wherein said resonator chamber is packed with glass fibers, especially glass wool.

19. An exhaust muffler according to claim 3, wherein two damping chambers are provided that are separated from one another by a partition, and wherein a catalytic converter is disposed in said partition.

20. An exhaust muffler according to claim 19, wherein in a direction of flow of exhaust gas, said resonator chamber is disposed in that damping

chamber that is disposed downstream.